

WHAT IS CLAIMED IS:

1. An electrode belt for electrical impedance tomography, the electrode belt comprising:
a belt material;

at least 16 electrodes on said belt material, said belt material being elastic at least in some sections, the electrode belt fully surrounding a test subject to be examined over the circumference
5 of the body;

electrode feed lines extending along the belt material; and

a feed line, said electrode feed line being connected to said feed line at least at one feed point.

2. An electrode belt in accordance with claim 1, further comprising: shaped elements provided as padding for at least two adjacent said electrodes for covering a sternal or spinal depression of a test subject.

3. An electrode belt in accordance with claim 1, wherein said electrodes are arranged at equally spaced locations from one another on the belt material.

4. An electrode belt in accordance with one of the claim 1, wherein silicone is used as the belt material.

5. An electrode belt in accordance with claim 1, wherein said belt material and said

electrode feed lines form plural belt segments with one or more of said electrodes arranged on individual belt segments.

6. An electrode belt in accordance with claim 5, wherein said electrodes are arranged at equal distances from each other within said belt segments.

7. An electrode belt in accordance with claim 1, further comprising a belt closure provided between two adjacent electrodes.

8. An electrode belt in accordance with claim 5, further comprising belt closures wherein each of said belt segments is provided with one of said belt closures.

9. An electrode belt in accordance with claim 7, wherein said feed points for electric lines are provided on each of said belt closures.

10. An electrode belt in accordance with claim 8, wherein said feed points for electric lines are provided on each of said belt closures.

11. An electrode belt in accordance with claim 1, wherein said feed points are arranged symmetrically in relation to one another with the belt material split into two sections of approximately equal size.

12. An electrode belt in accordance with claim 2, wherein said shaped elements are designed as one or more of said electrodes bulging forward.

13. An electrode belt in accordance with claim 2, wherein the shaped elements are projections.

14. An electrode belt in accordance with claim 2, wherein the shaped elements comprise cavities, which can be filled with a medium and are closed with a elastic membrane.

15. An electrode belt in accordance with claim 14, wherein liquids, gels or gases are provided as said medium.

16. An electrode belt in accordance with claim 1, wherein said belt material comprises at least three strands, which extend in parallel and are connected section by section via cross struts.

17. An electrode belt in accordance with claim 16, wherein said electrodes are arranged in the area of said cross struts.

18. An electrode belt in accordance with claim 16, wherein one of said strands is hollow and accommodates said electrode feed lines.

19. An electrode belt in accordance with claim 17, wherein said electrode feed lines are

disposed or folded in a triangular, meandering or loop-like pattern.

20. An electrode belt in accordance with claim 16, further comprising: shaped elements provided as padding for at least two adjacent said electrodes for covering a sternal or spinal depression of a test subject wherein a gel pad located between said outer strands and a middle strand is provided as said shaped element.

21. An electrode belt in accordance with claim 1, wherein said electrode belt has a coding means for providing information relating to the belt.

22. An electrode belt in accordance with claim 21, wherein said coding means is designed as a plug type connection on a feed line, a magnetic strip, a bar code strip, an EEPROM, a transponder or a digital/analog electronic unit.

23. An electrode belt in accordance with claim 1, further comprising:
an evaluating unit; and
wireless means for wireless communication between said electrode belt and said evaluating unit.

24. An electrode belt in accordance with claim 22, wherein said wireless means is connected in one assembly unit with said electrode belt.